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LETTERS TO THE EDITOR

Post-operative cycloplegia following ophthalmic surgery: it is NOT anesthesia

Cicloplegia no pós-operatório de cirurgia oftalmológica: NÃO é a anestesia

Dear Editor,

The practice of anesthesia has long been surrounded with a degree of mystique. This can be illustrated by the current lack of full-proof evidence on the mechanism of action of volatile anesthetics for example, which is for the most part hypothesized.¹ These blurred margins of knowledge cross-over into non-anesthesiologist practitioners using anesthetic techniques, sometimes, without fully grasping the full scope of knowledge associated to these (i.e. infiltration of local anesthetics, sedation). This mysticism of anesthesia is also exemplified by anesthetics and anesthesiologist being wrongfully accused for post-operative complications which cannot be explained otherwise.

A healthy 55-year-old female presented for anterior-chamber phakic intraocular-lens placement for correction of myopia of the left eye. The same procedure was performed on the right eye using retrobulbar anesthesia a few weeks prior uneventfully. Standard American Society of Anesthesiologists (ASA) monitors were placed, the patient was pre-medicated with 2 mg of intravenous midazolam, after which a retrobulbar block was performed. With the ocular globe in primary position a 23 G 31 mm needle was inserted through the skin of the infero-temporal orbital rim. The needle was advanced 15 mm tangentially and subsequently re-directed upwards and inwards to reach proximity to the muscle cone. With prior negative aspiration, 3 ml of 0.75% bupivacaine were injected. After 5 minutes internal and external ophthalmoplegia, as well as ocular anesthesia were achieved and the surgery proceeded uneventfully.

On post-operative day one the patient referred 7/10 pain (on an 11-point visual analog scale, (VAS), anchored with 0 = no pain and 10 = worst pain ever experienced) to the left eye, with associated fixed mydriasis, and extraocular eye movements were preserved. The patient was evaluated by the ophthalmologist, and the findings were deemed as residual anesthetic block and analgesics were prescribed. The patient was re-evaluated 3 days later with persistent symptoms; increased intraocular pressure was noted and treated

by the ophthalmologist, who again deemed the findings secondary to anesthesia; and was subsequently discussed with the anesthesiologist.

An anatomic review yielded the ciliary ganglion as the only structure in the needle's path which when compromised could prompt cycloplegia.² A thorough literature review showed no reported cases of ciliary ganglion injuries or long-term cycloplegia following retrobulbar blocks. However two similar cases were described following phakic intraocular lens placement,^{3,4} yielding the diagnosis of Urrets-Zavalía Syndrome, a rare post-operative complication, usually present after penetrating keratoplasty.³⁻⁵ Delayed filling of the iris capillaries and decreased perfusion were observed by iris fluorescein angiography confirming the diagnosis.

Two lessons can be drawn from the above: Urrets-Zavalía is a rare complication following phakic intraocular-lens surgery which anesthesiologists performing ocular blocks need to realize, and the importance of available literature to clarify undue allegations based on the mystique of anesthesia.

References

1. McKay RE. Inhaled anesthetics. In: Miller RD, Pardo MC, editors. *Basics of anesthesia*. 6th ed. Philadelphia: Elsevier; 2011. p. 82.
2. Putz R, Pabst R. *Atlas de Anatomia Humana Sobotta*, vol. 1, 21st ed. Madrid: Panamericana; 2001. p. 377.
3. Park SH, Kim SY, Kim HI, et al. Urrets-Zavalía syndrome following iris-claw phakic intraocular lens implantation. *J Refract Surg*. 2008;24:959–61.
4. Yuzbasioglu E, Helvacioğlu F, Sencan S. Fixed, dilated pupil after phakic intraocular lens implantation. *J Cataract Refract Surg*. 2006;32:174–6.
5. Urrets Zavalía Jr A. Fixed, dilated pupil, iris atrophy and secondary glaucoma. *Am J Ophthalmol*. 1963;56:257–65.

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